REMARKS

The Examiner is thanked for the performance of a thorough search. Claims 1-16, 18-33 and 35-48 are now pending in the application. The amendments to the claims as indicated herein do not add any new matter to this application. Furthermore, amendments made to the claims as indicated herein have been made to exclusively improve readability and clarity of the claims and not for the purpose of overcoming alleged prior art. Each issue raised in the Office Action mailed February 15, 2008 is addressed hereinafter.

I. ISSUES NOT RELATING TO PRIOR ART

a. CLAIM 42 -- 35 USC § 112

Claim 42 stands rejected under 35 USC § 112, second paragraph, due to lack of sufficient antecedent basis. Applicants believe that the objection is overcome by amended claim 42.

Reconsideration and withdrawal of the rejection is respectfully requested.

b. CLAIMS -- 35 USC § 112

Claims 37-41 and 44-48 stand rejected under 35 USC § 112, first paragraph, as allegedly failing to comply with the written description requirement. This is incorrect.

Proper support for claims 37-41 and 44-48 is provided in paragraphs [0050] – [0054], [0064] – [0067] and [0070] - [0076] of applicants' specification.

Reconsideration and withdrawal of the rejection is respectfully requested.

II. ISSUES RELATING TO ALLEGED PRIOR ART

A. CLAIMS -- 35 U.S.C. § 102(e): HARPER

Claims 1-7, 10-12, 16-24, 27-29, 32-36 and 42-43 stand rejected under 35 U.S.C. § 102(e) as allegedly unpatentable over Harper U.S. Patent No. 7, 058, 016 B1 (hereinafter "Harper"). The rejection is respectfully traversed.

CLAIM 1

Present claim 1 recites:

1. A method of generating routing information in a data communications network having, as elements, nodes and links, the method comprising the steps performed at a first network element of:

receiving at the first network element information relating to a change in the network at a second network element,

determining an affected set of network elements, wherein the affected set comprises network elements which are reachable from the second network element,

determining a furthest network element in the affected set as located at a furthest distance from the first network element,

identifying a sequence in which updating of routing information at each network element in the affected set should occur, and

updating the routing information at the first element in sequence. (Emphasis added.)

Claim 1 recites at least one feature which is not described in Harper. For example, Harper does not describe "**determining an affected set of network elements, wherein the affected set comprises network elements which are reachable from the second network element.**"

The Office Action states that "Harper teaches **determining, an affected set, the set of nodes from which a target network element is reachable via the second network**" because Harper discloses "[n]odes with new route information re-evaluated new routes starting form [sic] the changed node." (Office Action, pages 4-5) This is incorrect.

Harper describes recalculating routes using an incremental Dijkstra algorithm, which updates information about individual links without actually examining every node affected by a routing change, and thus missing some of the nodes affected by the change. (Harper: column 5,

lines 33-38) According to Harper, route information is updated only for those nodes for which the new route information improves at least one of the existing routes. Harper's nodes are sorted into order of cost from the current node. Each change in state is evaluated. If the change does not improve existing routes from a particular node, the nodes in a subtree rooted at the particular node are not even considered. (Harper: column 5, lines 31-48).

Therefore, Harper does not determine each network element that was reachable from the second network element manifesting a change in its state. To identify each network element affected by the failure of the second node, Harper would have to generate a reverse spanning tree rooted at the second node, which Harper does not describe. A reverse spanning tree can be obtained by, for example, performing a reverse Shortest Path First (SPF) algorithm, which Harper does not do either.

In fact, Harper does not even describe how to determine how the manifested change is going to impact any upstream network elements unless, upon calculating new routing costs, it determines that a previously existing link is now lost. Such an approach does not result in actually identifying each network element that is affected by the failure of the second node. Therefore, Harper simply does not **"determine an affected set of network elements comprising the network elements which are reachable from the second network element,"** as claimed.

Further, the Office inaccurately quotes Harper's specification. Harper only states the following:

> Nodes with new route information are sorted into order of cost from the **current node** (the root). Each change in state is then evaluated. If it has not effect on existing routes, it is ignored. If it improves existing routes, the routes are re-evaluated starting from the **changed node**. If existing

> routes are lost or made worse, the entire subtree from the **affected link** is re-evaluated. Each node is reattached at the best (lowest cost) point in the remaining spanning tree, if possible, and routes re-evaluated starting from the nodes that have been reattached. The effect is equivalent to running the full Dijkstra algorithm, at a much lower computation cost. (Harper: column 5, lines 36-48) (Emphasis added)

Harper's changed nodes and affected links are only those network elements for which the routes are lost or became worse in comparison to the routes existing before the change. For example, Harper's changed nodes and affected links do not include all the nodes affected by the change because Harper does not even consider the nodes in a subtree rooted at the particular node for which the change does not improve existing routes. Thus, Harper's changed nodes and affected links are not necessarily all the network elements that are reachable from the second node that manifested a change. Therefore, Harper's changed nodes and affected links are different than applicants' "**affected set of network elements comprising the network elements which are reachable from the second network element.**"

Further, Harper does not describe "**determining a furthest network element in the affected set as located at a furthest distance from the first network element,**" as claimed. The Office Action states that Harper discloses "the number of hops from the first network element to the furthest network element in the affected set" in column 5, lines 30-50. (Office Action, page 5) This is incorrect.

As discussed above, Harper **does not "determine an affected set** of network elements comprising the network element which are reachable from the second network element, which is manifesting a change," because Harper's changed nodes and affected links are not all the network elements that are reachable from the second node that manifested the change. Since

Harper does not "**determine an affected set [...],**" Harper cannot determine which of the affected network element in the affected set is the furthest.

For all the reasons above, claim 1 recites at least one feature that is not described in Harper, and therefore the § 102 rejection is not supported.

Reconsideration and withdrawal of the rejection is respectfully requested.

CLAIMS 18, 35 AND 42

Claims 18, 35 and 42 recite features similar to those in claim 1. Therefore, for the reasons discussed for claim 1, Harper does not describe claims 18, 35 and 42.

Thus, reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e) is respectfully requested.

DEPENDENT CLAIMS

The claims not discussed thus far are dependent claims, each of which depends (directly or indirectly) on one of the independent claims discussed above. Each of the dependent claims is therefore allowable for the reasons given above for the claim on which it depends. In addition, each of the dependent claims introduces one or more additional limitations that independently render it patentable. However, due to the fundamental differences already identified, to expedite the positive resolution of this case, a separate discussion of those limitations is not included at this time. The Applicant reserves the right to further point out the differences between the cited art and the novel features recited in the dependent claims.

III. CONCLUSION

For the reasons set forth above, all pending claims are in condition for allowance. A petition for extension of time is hereby made to the extent necessary to make this reply timely filed. If any applicable fee is missing or insufficient, the Commissioner is hereby authorized to charge any applicable fees to our Deposit Account No. 50-1302.

Respectfully submitted,

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